

REMARKS

Claims 1-5, 8-10, 24-25, 29-37, 39-41, 43-46, and 48-58 are presented for further examination. Claims 7, 12, 13, 38, and 42 are withdrawn from consideration in view of the prior restriction and responsive election. Claims 26-28 and 47 have been canceled. Claims 1, 8, 24, 30, 32-35, 37, 39, 41, 43-45, 48, and 52 have been amended. Claims 55-58 are new.

In the Office Action mailed March 18, 2004, the Examiner has objected to the specification and to claims 43-45 because of the use of means-plus-function claim language. In view of the foregoing amendments, this objection is moot.

Turning to the merits, the Examiner rejected claims 1-2, 4-5, 8, 24-29, 32, 33, 34-35, 37, 39-41, 43-44, 46-47, 48-49, and 51-54 under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,228,023 (“Zaslavsky et al.”). Claims 1-5, 8-10, 24-37, 39-41, and 43-54 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,662,673 (“Kieturakis”).

Applicants respectfully disagree with the bases for the rejections and request reconsideration and further examination of the claims.

Technical differences between the applied references and the embodiments of the invention elected for prosecution in this application will now be discussed. Of course, these discussed differences regarding the elected embodiments, which are disclosed in detail in the patent specification, are not intended to define the scope of any of the claims. Where presented below, such discussed differences merely assist the Examiner in appreciating important claim distinctions discussed thereafter. The elected embodiments of the present invention are directed to a device for grasping tissue and other material that minimizes trauma to the tissue, such as puncturing completely through the tissue or other material. A shaft or tubular member is provided that has a distal tip on which a face or surface is formed. This face or surface has an annular shape when surrounding an opening to a longitudinal axial bore in the elongate structural member. Ideally, the annular face is planar and is oriented substantially perpendicular to the longitudinal axis of the elongate structural member. A projection, such as a barb, is formed from material of the face or surface to project or extend upward therefrom to present a sharp edge at a predetermined angle to the face or surface. When the device is rotated, the projection engages

the tissue or other material without penetrating or puncturing completely through the tissue or other material.

Zaslavsky et al., U.S. Patent No. 6,228,023, is directed to a tissue pick that, as shown in the figures referenced by the Examiner, has a hollow tube 22 that slideably receives a solid shaft 26 therein. At a distal end of the shaft 26 is mounted a tissue grasping member 32 that includes two nearly horizontally-opposing prongs 36, 38 that are each helically formed. The prongs 36, 38 have sharp points 40, 42 to embed in tissue when the shaft 26 is rotated with respect to the tube 22 (column 6, lines 35-52; and column 7, lines 28-34). It is clear from the foregoing that the tissue grasping member 32 rotates relative to the outer tube 22 and hence is not formed from material of the annular surface surrounding the opening in the tube 22. Although Zaslavsky et al. are silent as to the means of attachment of the tissue grasping member 32 to the shaft 26, it is clear from the relative size of the tissue grasping member 32 that it is neither formed from material on a face of the shaft 26 nor from any material of the shaft 26 itself.

Kieturakis, U.S. Patent No. 5,662,673, is directed to a surgical trocar that is designed to penetrate a body cavity for draining fluid therefrom. The trocar has helical blade and shield elements that interface together to incise a pathway completely through the body wall. This is inapposite to the present invention, which is designed to grasp tissue, not drill a hole through it.

Turning to the claims, claim 1 is directed to a device for grasping tissue that comprises a tubular member having a distal tip and annular surface surrounding a terminal port; and at least one barb formed on the annular surface projecting at an angle from the angular surface of the tubular member, each at least one barb having a sharp edge configured to insert into the tissue without penetrating through the tissue as the tubular member is rotated about a longitudinal axis. In this embodiment, an annular surface is one that is ring-shaped, which in this case is formed around the opening in the tubular member at the distal tip. As discussed above, Kieturakis teaches helical blades that are designed to penetrate through a body wall. Nowhere does Kieturakis teach or suggest an annular surface surrounding a terminal port as in the claimed combination. As discussed above, Zaslavsky et al. do not teach or suggest at least one barb formed on an annular surface at a distal tip of a tubular member. Rather, Zaslavsky et al. teach

helical prongs *attached* to the end of a solid shaft that is inserted within a tubular member. In view of the foregoing, applicants respectfully submit that claim 1 and dependent claims 2-6 are clearly allowable over the references cited and applied by the Examiner.

Independent claim 8 is directed to a device for grasping tissue, the device comprising a cannula having at a distal tip an annular surface surrounding a terminal port; and a plurality of sharp-edged barbs formed on the annular surface and projecting at an angle from the annular surface of the cannula and configured to grasp tissue without puncturing through the tissue when the cannula is rotated about a longitudinal axis. Clearly claim 8 is not anticipated by Zaslavsky et al. because the tissue pick utilizes helical prongs *attached* to a solid shaft for rotation inside a tube. Hence, Zaslavsky et al. does not teach or suggest a plurality of sharp-edged barbs formed on the annular surface of a distal tip of a cannula that surrounds a terminal port. Kieturakis is directed to a trocar, not a cannula, which has a completely different construction and method of use. Moreover, nowhere does Kieturakis teach or suggest an annular surface surrounding a terminal port from which a plurality of sharp-edged barbs are formed. In view of the foregoing, applicants respectfully submit that claim 8 and dependent claims 9 and 10 are allowable over the references cited and applied by the Examiner.

Independent claim 24 recites a device for controlling an object, the device having a shaft with a distal tip and an annular surface formed thereon; and at least one projection formed on the annular surface to extend from the annular surface, the at least one projection configured to hold the object without puncturing through the object when the shaft is rotated in a first direction about a longitudinal axis of the shaft. Claim 24 is clearly allowable over Kieturakis for the reasons discussed above with respect to claims 1 and 8, *i.e.*, Kieturakis teaches puncturing through an object and Kieturakis does not teach or suggest an annular surface at a distal tip of the shaft as disclosed and claimed in the combination of the present invention. Zaslavsky et al. likewise do not teach or suggest the present invention for the reasons discussed above with respect to claims 1 and 8, *e.g.*, the helical hooks are not formed on an annular surface at the distal tip of a tubular shaft. For these reasons, applicants respectfully submit that claim 24, and dependent claims 25 and 29-31 are allowable over the references cited and applied by the Examiner.

Independent claims 33, 34, 43, 48, 52 recite limitations similar to those discussed above with respect to claims 1, 8, and 24 with respect to not puncturing or penetrating the tissue, material or object and are thus distinguishable from Kieturakis. In addition, Zaslavsky et al. does not teach or suggest a planar surface or a face from which one or more barbs or projections extend. Rather, Zaslavsky et al. disclose a pair of opposing helical prongs that are formed on an end piece that does not have a face or planar surface. Applicants respectfully submit that these independent claims, and all claims depending therefrom, are allowable over Zaslavsky et al. and Kieturakis for the reasons discussed above.

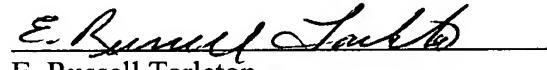
New claims 55 and 56 each recite limitations similar to those discussed above with respect to not puncturing or penetrating the tissue or other material and hence are allowable over Kieturakis, but they further include the recitation that the barbs are unidirectional, which distinguishes them from Zaslavsky et al. as recognized by the Examiner. New claims 57 and 58 include limitations similar to those discussed above with respect to claims 1, 8, and 24, distinguishing them from the cited references, but they further recite the at least one projection being formed from the material of the planar surface or face, respectively. Nowhere do Zaslavsky et al. teach or suggest such a feature. Applicant respectfully submits that claims 55-58 are also allowable.

In view of the foregoing, applicants submit that all of the claims in this application are clearly in condition for allowance. In the event the Examiner finds minor informalities that can be resolved by telephone conference, the Examiner is urged to contact applicants' undersigned representative by telephone at (206) 622-4900 in order to expeditiously resolve prosecution of this application. Consequently, early and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

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